

**REMARKS**

Reconsideration of the application is respectfully requested. No claims have been amended, cancelled, or added.

Claims 1, 4-9, 11, 15-16, 19, 23-25, 27, and 30 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,589,797 to Gans et al. ("Gans"). Claims 2 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 1. Claim 26 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 25 and further in view of U.S. Patent No. 5,396,189 to Hays ("Hays"). Claim 31 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 30 and further in view of Hays. Claim 13 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 1 and further in view of Hays. Claim 29 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 25 and further in view of U.S. Patent No. 5,251,328 to Shaw ("Shaw"). Claim 32 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 30 and further in view of Shaw. Claim 18 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 15 and further in view of Shaw. Claim 10 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 1 and further in view of Shaw. Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Gans as applied to claim 15.

Claim 33 has been allowed. Claims 14, 20-21, and 28 have been objected to as being dependent upon a rejected base claim, but have been indicated to be allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

In response to the rejection of claims 1, 4-9, 11, 15-16, 19, 23-25, 27, and 30 as anticipated by Gans, Applicant respectfully submits that at least one distinguishing feature of each of these claims is not taught or suggested by Gans. The Office Action asserts that Gans discloses a method for handling interference that is disturbing a desired signal that meets all of the limitations of the rejected claims. The Office Action initially states that Gans teaches providing a signal comprising a desired component and an interference component and that this signal is  $S_{IN}$ . However, Applicant respectfully submits that a review of FIGURE 1 and accompanying text of Gans reveals that  $S_{IN}$  does not have a desired component and an

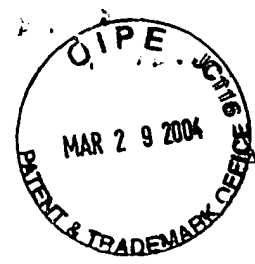
interference component, but rather only includes a desired component. It is Power Amplifier 20 of FIGURE 1 that introduces distortion, rather than distortion being present in  $S_{IN}$  to begin with. Applicant respectfully submits that Gans teaches that the signal  $S_{IN}$  is predistorted in order to counteract distortion introduced by the Power Amplifier 20.

The Office Action also asserts that Gans discloses filtering the signal to produce a bandpass filtered signal around the expected fundamental of the interference component of the signal. The Office Action has apparently cited to the cuber 14 and equated the cuber 14 to the bandpass filter recited in claim 1. However, a review of col. 3, lns.34-40 of Gans reveals that the cuber 14 does not operate as a bandpass filter.

Further, the Office Action asserts that Gans teaches generating harmonics of the interference component and estimating an overall interference component via a cuber synthesizer which, the Office Action asserts, inherently involves determining the fundamental frequency. Applicant respectfully submits that the Office Action is incorrect, given that there is no interference component in  $S_{IN}$ .

The Office Action also asserts that Gans teaches applying the generated interference estimate to the signal to produce a desired signal and apparently equates  $S_{OUT}$  with the desired signal. However,  $S_3$ , which is the predistorted signal fed to the Power Amplifier 20, may not be equated with the desired component estimate. To the extent that a generated interference estimate is produced by the system disclosed by Gans, a version of this interference estimate is subtracted from the desired signal itself when signal  $S_2$  is subtracted from a delayed version of  $S_{IN}$  at summer 18. The signal  $S_3$ , which is output by the summer 18, is, rather than the desired signal, a pre-distorted version of  $S_{IN}$  that is to be input to the Power Amplifier 20. As noted above, the Power Amplifier 20 introduces distortion.

The Office Action also asserts that Gans teaches feeding back the desired component through a bandpass filter to adjust the interference component estimate. However, since  $S_{IN}$  only has a desired component, and  $S_{OUT}$  is not equivalent to  $S_{IN}$ , the desired component (i.e.,  $S_{IN}$ ) is not fed back in the system disclosed by Gans.



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Applicant respectfully submits that each of rejected independent claims 1, 15, 24, 25, and 30 distinguishes over Gans. Withdrawal of the rejection of independent claims 1, 15, 24, 25, and 30 as anticipated by Gans is respectfully requested.

Claims 2-13, 16-19, 22-23, 26-27, 29, and 31-32 have each been rejected as unpatentable over Gans or Gans and Hays or Shaw. Applicant respectfully submits that neither Hays nor Shaw supplies the deficiencies noted above of Gans. Given that each of dependent claims 2-13, 16-19, 22-23, 26-27, 29, and 31-32 depends from and further limits an independent claim that is in allowable form, each of these dependent claims is also deemed to be in allowable form. Withdrawal of the rejection of dependent claims 2-13, 16-19, 22-23, 26-27, 29, and 31-32 is respectfully requested.

Applicant appreciates the Examiner's allowance of claim 33 and the indication of allowable subject matter with respect to claims 14, 20-21, and 28. Applicant respectfully requests withdrawal of the objections to claims 14, 20-21, and 28 on the basis that each of these dependent claims depends from and further limits an independent claim that is in allowable form.

In view of the above, each of the presently-pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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